NHDOT SPR2 PROGRAM

RESEARCH PROGRESS REPORT

Project # **SPR 26962W**		**Report Period** Year 2021 ☐Q1 (Jan-Mar) ☐Q2 (Apr-Jun) X Q3 (Jul-Sep) ☐Q4 (Oct-Dec)
Project Title: **Log Jam Monitoring**		
Project Investigator: Tom Ballestero **Phone: 603.862.1405**		**E-mail:** tom.ballestero@unh.edu
Project Start Date: May 1, 2019	**Project End Date:** April 30, 2022	**Project schedule status:** ☐ On schedule ☐ Ahead of schedule X Behind schedule

Brief Project Description:

Extreme bank erosion along Route 16 in Errol is to be stabilized using an engineered log jam (ELJ). This is the first installation of an ELJ by NH DOT, and as such NH DOT is interested in the benefits of the structure pertaining to performance, habitat, and costs. The project shall be monitored for three years, including eight months of pre-construction monitoring and two years of post-construction monitoring. Monitoring activities are to cover hydraulic, structural, flora, and fauna; in addition, the monitoring provides inspection information to DOT to assess any need for maintenance or repairs. The ultimate objective of the project is to document all salient aspects of ELJs relative to road planning, permitting, construction, and maintenance, plus documenting stream system changes resulting from the ELJ.

Progress this Quarter (include meetings, installations, equipment purchases, significant progress, etc.):

After the conclusion of the summer 2021 field efforts (in the previous quarter), no substantial efforts were performed in the present monitoring period aside from the reduction of the summer 2021 field data. The construction, in river silt booms were removed August 4, 2021. These booms prevented underwater monitoring of fish and other aquatic species. The fact that the floating silt curtain was still in place in front of the log jam meant that fish could not easily access the shoreline, and therefore the underwater cameras deployed in the June 7, 2021 event were not representative of just the log jam shoreline. Allowing a few weeks for fauna to acclimate to the new site conditions after the booms were removed would have moved this monitoring to September, at which time it was considered infeasible to compare May-June photographic data to September data, and therefore no underwater cameras were deployed this quarter.

Items needed from NHDOT (i.e., Concurrence, Sub-contract, Assignments, Samples, Testing, etc…):

Nothing at this time

Anticipated research next three (3) months:

Continue synthesis of field data from summer 2021, continue the post-construction hydraulic modeling, and planning for summer 2022 field campaign.

Circumstances affecting project:

From the last TAG meeting, NH DOT is required to monitor the log jam for two years after construction. Because construction was delayed one year (completed in spring 2021) this means monitoring through summer 2022 which is beyond the present contract end date April 20, 2022). This also means that there was an additional year of pre-construction monitoring. Therefore, both the contract end date and the budget will be revisited in late fall 2021, with an anticipated contract extension to 30 September 2022.

Tasks (from Work Plan)	Planned % Complete	Actual % Complete
Task 1 Kick off meetings and information gathering	100% complete	100% complete
Task 2 (in the seventh quarter, proceeding as planned)	90%	80%

Barriers or constraints to implementing research results

Contract extension and budget revision will be necessary to meet the original project objectives.